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UNITED STATES PATENT AND TRADEMARK OFFICE

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10/053,629	01/22/2002	Roland Meier	10063-0007	3611

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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>1</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 January 2002</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>22-60</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) <u>22-60</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☒ All b)☐ Some * c)☐ None of:

   1.☒ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date ∴
4) ☒ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. <u>7</u> .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1.   **Claims 22-60** are pending in this action.

Claim Objections

2.   **Claims 36, 38** and **40** are objected to under 37 CFR 1.75(c), as being of improper

dependent form for failing to further limit the subject matter of a previous claim. Applicant is

required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent

form, or rewrite the claim(s) in independent form. Claims 36 and 38 depend on canceled claim

17, and claim 40 depends on canceled claim 20. Applicant is advised to correct the dependencies

of these claims. These claims were rejected in the Office with the assumption that they depend

independent claim 22.

Claim Rejections - 35 USC ' 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   **Claims 22, 27-41** and **46-60** are rejected under 35 U.S.C. 103(a) as being unpatentable

over *Alessi et al* (U.S. 4,979,032) in view of *Giorgianni et al* (U.S. 5,452,111).

Regarding **independent claims 22, 39** and **41**, and for **claims 28, 40, 47, 49, 50** and **60**,

Alessi teaches a process for modeling photographic images produced by light modulators by

teaching a an invention that relates to a <u>color image reproduction </u>system (column 1, lines 20-

21; column 3, lines 49-51) wherein an operator edits electronically the color and composition of

an original photographic image to produce an aesthetically modified image using a image

scanner 12 serves for scanning an original image on a photographic input film 14 and for

producing red (R), green (G) and blue (B) image-bearing signals in digital form (column 3, lines

52-58, figure 1 at 12, 14) such that a charge coupled device (CCD) linear image sensor 72 is

arranged to receive a line of light modulated in accordance with the film image in order to

produce R, G and B image-bearing signals (column 6, lines 57-66).

Furthermore, Alessi teaches a method of calculating the light modulation values by

modeling the response of the image reproducing system model to the input image control data

by teaching the functional relationship between an RGB color space for a given film and the

database color space wherein a scanner functions for reading R, G, and B density values from

color test strips for a particular film; spectrophotometric methods, known in the photographic

art, serve to provide data needed to **calculate** the transformation into database color space

(column 5, lines 17-25).

However, Alessi does not teach a method of calculating light modulation values that

describe color values of the image. On the other hand, Giorgianni teaches this concept by

teaching a method and means for generating a data-set from which the mathematical

transformations to convert R,G,B image-bearing signals to trichromatic density values wherein

test images may are created by known light sources and calculating trichromatic exposure

values using methods known in the photographic art such that each film receives equivalent

exposures, appropriate for its red, green, and blue speeds and film color patches are read by

transmission scanner which produces R,G,B image-bearing signals corresponding each color

patch (column 6, lines 59 through column 7, lines 21).

Thus, it would have been obvious to person of ordinary skill in the art to combine Alessi

and Giorgianni because while Alessi teaches a <u>color image reproduction</u> system (column 1,

lines 20-21; column 3, lines 49-51) wherein an operator edits electronically the color and

composition of an original <u>photographic image</u> to produce an aesthetically modified image

using a image scanner 12, Giorgianni teaches a method of calculating light modulation values

that describe color values of the image by teaching a method and means for generating a data-

set from which the mathematical transformations to convert <u>R,G,B image-bearing signals</u> to

trichromatic density values wherein test images may are created by known <u>light sources and</u>

<u>calculating</u> trichromatic exposure values using methods known in the photographic art such that

each film receives equivalent exposures, appropriate for its red, green, and blue speeds and film

color patches are read by transmission scanner which produces R,G,B image-bearing signals

corresponding each color patch (column 6, lines 59 through column 7, lines 21). The

motivation for combining these inventions would have been to provide an improved color

imaging system (column 3, lines 55-57).

Regarding **claims 27, 29, 46** and **48**, in further discussion of claims 22 and 41, Alessi

teaches a method of calculating the light modulation values by modeling the response of the

image reproducing system model to the input image control data by teaching the functional

relationship between an RGB color space for a given film and the database color space wherein

a scanner functions for reading R, G, and B density values from color test strips for a particular

film; spectrophotometric methods, known in the photographic art, serve to provide data needed

to **calculate** the transformation into database color space (column 5, lines 17-25).

Regarding **claims 30** and **51**, in further discussion of claims 22 and 41, Alessi teaches

how one or more processing devices, denoted by a microprocessor 86, perform, under **program**

control, both logic operations to retrieve data values from the correct addresses of the LUT

selected and arithmetic operations for linear interpolation on the values retrieved (column 8,

lines 25-32, figure 3 at 86).

Regarding **claims 31** and **52**, in further discussion of claims 30, 51, Alessi teaches how

FIG. 2A diagrammatically illustrates that the control apparatus 20 causes the workstation 16 to

load its memory with database color space data corresponding to the version of the reproduced

image 38 that is preferred (see figure 3 at 88; column 8, lines 62 through column 9, lines 1-15,

figure 2A at 16, 20).

Furthermore, Alessi teaches peripheral storage 88 (see figure 3 at 88).

Regarding **claims 32-38** and **53-59,** in further discussion of claims 22 and 41, Alessi

teaches a scanner 70, control device via workstation 86 within a photolab (column 4, lines 1-

12).

5.   Claims 23-26 and 42-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Alessi et al (U.S. 4,979,032) in view of *Giorgianni et al* (U.S. 5,452,111), as in claim 22 above,

and further in view of *Bestmann* (U.S. 5,481,380).

Regarding claims 23, 24, 26, 42, 43 and 45, in further discussion of claims 22 and 41,

Alessi teaches a process for modeling photographic images produced by light modulators by

teaching a an invention that relates to a color image reproduction system 10 (column 1, lines 20-

21; column 3, lines 49-51) wherein an operator edits electronically the color and composition of

an original photographic image to produce an aesthetically modified image using an image

scanner 12 that serves for scanning an original image on a photographic input film 14 and for

producing red (R), green (G) and blue (B) image-bearing signals in digital form (column 3, lines

52-58, figure 1 at 12, 14) such that a charge coupled device (CCD) linear image sensor 72 is

arranged to receive a line of light modulated in accordance with the film image in order to

produce R, G and B image-bearing signals (column 6, lines 57-66).

However, Alessi and Giorgianni do not teach how light modulation values describe the

modulation strength of the light modulators in the image regions. On the other hand, Bestmann

teaches this concept by teaching an invention that relates to a method of calibration of color

values in color conversion for image processing wherein light sources 15, 16 illuminates a color

original 17 point-by-point and line-by-line such that the scan light modulated with the image

content of the scanned color original 17 is resolved into three sub-beams of different spectral

compositions (column 4, lines 42-57, figure 3 at 15-17). Also, Bestmann teaches how a spectral

photometer 34 would be employed to relate the color values by analyzed based on the spectral

compositions (column 9, lines 19-25, figure 5 at 34).

Thus, it would have been obvious to a person of ordinary skill in the art to combine

Alessi, Giorgianni and Bestmann because while the combination of Alessi and Giorgianni teach

a method of calculating light modulation values that describe color values of the image,

Bestmann teaches how light modulation values would describe the modulation strength of the

light modulators in the image regions by means of a spectral photometer 34 and light sources

15, 16 that illuminates a color original 17 point-by-point and line-by-line such that the scan

light modulated with the image content of the scanned color original 17 is resolved into three

sub-beams of different spectral compositions (column 4, lines 42-57, figure 3 at 15-17). The

motivation for combining these inventions would have been to develop an improved method of

calibrating color values in a color conversion apparatus (column 1, lines 5-11).

Regarding **claims 25** and **44**, in further discussion of claims 22 and 41, Alessi teaches a

process for modeling photographic images produced by light modulators by teaching a an

invention that relates to a color image reproduction system 10 (column 1, lines 20-21; column 3,

lines 49-51) wherein an operator edits electronically the color and composition of an original

photographic image to produce an aesthetically modified image using an image scanner 12 that

serves for scanning an original image on a photographic input film 14 and for producing red

(R), green (G) and blue (B) image-bearing signals in digital form (column 3, lines 52-58, figure

1 at 12, 14) such that a charge coupled device (CCD) linear image sensor 72 is arranged to

receive a line of light modulated in accordance with the film image in order to produce R, G and

B image-bearing signals (column 6, lines 57-66).

However, Alessi and Giorgianni do not teach the method of adapting the dynamic range

of the color densities reproducible in the image control data color space. On the other hand,

Bestmann teaches this concept by teaching how the dynamic range of the measured color values

can be adapted to the signal resolution wherein the analog measured values are converted into

digital measured color values R, G and B (column 4, lines 57-67, figure 3).

Thus, it would have been obvious to a person of ordinary skill in the art to combine

Alessi, Giorgianni and Bestmann because while the combination of Alessi and Giorgianni teach

a method of calculating light modulation values that describe color values of the image,

Bestmann teaches how the dynamic range of the measured color values can be adapted to the

signal resolution wherein the analog measured values are converted into digital measured color

values R, G and B (column 4, lines 57-67, figure 3). The motivation for combining these

inventions would have been to develop an improved method of calibrating color values in a

color conversion apparatus (column 1, lines 5-11).

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

U.S. Patent 5,867,252 to *Tanibata* for an image printer.

U.S. Patent 4,992,861 to *D'Errico* for a color image reproduction apparatus.

U.S. Patent 5,6363,143 to *Takahashi* for a method and apparatus for estimating color

temperature, photographing apparatus, and method and apparatus for determining exposure.

Contact Information

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Uchendu O. Anyaso whose telephone number is (703) 306-5934.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve

Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington,

VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this

application or proceeding should be directed to the Technology Center 2600 Customer Service

Office whose telephone number is (703) 306-0377.

Uchendu O. Anyaso

12/20/2004

CHANH NGUYEN
PRIMARY EXAMINER